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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/928,882	08/13/2001	Masaki Katoh	2271/65729	8147

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EXAMINER

CHEN, TIANJIE

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 07/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/928,882

Applicant(s)

KATOH ET AL.

Examiner

Tianjie Chen

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Non-Final Rejection

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Nogami et al (US 5,276,670).

With regard to claim 1, Nogami et al shows a phase-change type optical information recording medium in Fig. 7 including: a transparent substrate 1; a first protective layer 2 on the substrate 1; a recording layer 3 on said first protective layer 2; a second protective layer 4 on said recording layer 3; and a reflective layer 5 on said second protective layer 4, wherein assuming that a minimum recording linear velocity to be V1 (the third from left circle on curve A in Fig. 9), a maximum recording linear velocity to be V2 (the rightmost circle on curve A in Fig. 9), and a degree of modulation at the time of reading out information to be $I(V)$, then a value of $I(V2) / I(V1)$ is within a range from 1 to 1.2 (Fig. 9; column 9, lines 45-56).

With regard to claim 2, Nogami et al further shows a ratio between the maximum recording linear velocity V2 and the minimum recording linear velocity V1 is: $V2/V1 \geq 2.5$.

With regard to claim 3, Nogami et al further shows that the minimum recording linear velocity V1 is 4.8 m/s or more.

With regard to claim 4, Nogami et al further shows that the maximum recording linear velocity V2 is 12.0 m/s or more.

With regard to claim 8, Nogami et al shows a phase-change type optical information recording medium as described above including at least one recording layer which records information based on crystalline-to-crystalline or crystalline-to-amorphous transition, said phase-change type optical information recording medium being rotated around a center of rotation when recording information in or reading information from said recording layer, wherein when the minimum and maximum linear velocities of rotation are respectively V1 and V2, then a value of a degree of modulation corresponding to the maximum linear velocity $I(V2)$ divided by a degree of modulation corresponding to the maximum linear velocity $I(V1)$ is between 1 and 1.2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nogami et al (US 5,276,670) in view of Shibakuchi (JP 2000-222776A).

With regard to claim 5-7, Nogami et al shows a phase-change type optical information recording medium as described above, but fail to show the recording layer

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contains AgInSbTe as a main component with nitrogen added thereto; and the thickness of the recording layer is in a range from 13 nm to 23 nm.

Shibakuchi shows a phase-change type optical information recording medium, wherein the recording layer contains AgInSbTe as a main component; with nitrogen added thereto ([0054]); and the thickness of the recording layer is 16 nm ([0057]), which is in a range from 13 nm to 23 nm.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to use AgInSbTe with N added and thickness of 16 nm as recording layer in Nogami et al's device as taught by Shibakuchi. The rationale is as follows: Shibakuchi teaches that when using this recording layer the crystallization transition temperature becomes higher, thus obtaining higher thermal stability and the information can be maintained for longer time ([0021]). One of ordinary skill in the art would have been motivated to use the recording layer taught by Shibakuchi in order to obtain better thermal stability and maintain information for longer time.

Conclusion

4. The prior art made of record in PTO-892 Form and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703)746-6037 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

A handwritten signature in cursive script, reading "Chen Tianjie".

Tianjie Chen
Examiner
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July 16, 2003